



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,055	03/19/2004	Matthew R. Sivik	3246	7978

7590 08/16/2007
THE LUBRIZOL CORPORATION
Patent Administrator - Mail Drop 022B
29400 Lakeland Boulevard
Wickliffe, OH 44092-2298

EXAMINER

LANG, AMY T

ART UNIT	PAPER NUMBER
----------	--------------

3731

MAIL DATE	DELIVERY MODE
-----------	---------------

08/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/805,055

Applicant(s)

SIVIK ET AL.

Examiner

Amy T. Lang

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final:
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-8 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Tipton (US 5,354,485) in view of Lange (US 6,258,761).

With regard to **claims 1-4 and 8**, Tipton discloses a grease composition comprising an esterified polymer, a thickening agent, and an oil of lubricating viscosity (see entire document). The composition comprises an esterified maleic anhydride-styrene copolymer, which clearly overlaps the instant claims (column 21, lines 19-28). Although Tipton does not specifically disclose the wt% of the polymer in the composition, Tipton teaches 1 wt% of a post-treated esterified maleic anhydride-styrene copolymer in Example IX (column 23, lines 23-26). Since the post-treated polymer is merely expressed in an example, it would have been obvious to one of ordinary skill in

Art Unit: 3731

the art at the time of the invention for the esterified maleic anhydride-styrene copolymer to also be utilized at 1 wt%.

Furthermore, Example IX only teaches a lubricant composition. However, Tipton discloses that thickening agents are added to the lubricant composition to produce grease (column 23, lines 55-65). The disclosed thickeners include hydroxystearic acid, which overlaps the instantly claimed metal salt of a carboxylic acid (column 23, line 66 through column 24, line 9). Other thickening agents include clay, specifically bentonite (column 24, lines 10-24).

Tipton is silent regarding the total acid number (TAN) of the esterified polymer. Lange discloses a lubricating composition comprising an esterified maleic anhydride-styrene copolymer with specific TAN values of 15 and 12.2 (column 1, lines 4-7; column 8, lines 56-53; Example A-1 and Example A-1, column 15). Since Tipton discloses a lubricating composition, wherein a thickening agent is added to produce the grease, with an esterified maleic anhydride-styrene copolymer and Lange also teaches a lubricating composition with an esterified maleic anhydride-styrene copolymer having a specific TAN value, it would have been obvious to one of ordinary skill at the time of the invention for the polymer of Tipton to also have a TAN value as taught by Lange.

With regard to **claim 5**, since Tipton specifically discloses an esterified polymer, it would have been obvious to one of ordinary skill at the time of the invention for almost all the maleic anhydrides, about 99.5%, to be converted to ester groups.

With regard to **claims 6 and 7**, Tipton discloses the polymer esterified with C₈₋₁₈ and C₄ alcohols, which clearly overlaps the instant claims (column 23, lines 23-26).

With regard to **claim 11**, since Tipton discloses an esterified copolymer derived from monomers of styrene and maleic anhydride, the method steps of mixing the two components to form a polymer, reacting the polymer with two alcohols, and adding the final product to lubricating oil with a thickening agent is intrinsically met. However, if applicant were to argue that Tipton does not disclose mixing the two components with a solvent, Lange also discloses a method to produce the esterified copolymer wherein a solvent is specifically utilized (column 13, lines 4-20).

Response to Arguments

4. Applicant's arguments, filed 6/11/2007, with respect to Lange (US 6,258,761 B1) have been fully considered and are persuasive. The rejection has been withdrawn. However, it is noted that the Declaration filed 6/11/2007 in paragraph 2 does not overlap the instantly claimed limitations. Specifically, the unsaturated dicarboxylic acid anhydride or derivative is not esterified in the instant claim 1 so that the Declaration is unpersuasive until applicant clarifies that the same esterified polymer is produced.

Should applicant narrow the claim language from "A grease composition comprising" to "A grease composition consisting essentially of" and submit a declaration to exclude thiosulfates, which are present in the composition of Tipton, the above rejection would be overcome.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy T. Lang whose telephone number is 571-272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LoAn Thanh can be reached on 571-272-4966. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

8/9/2007
ATZ


LOAN H. THANH
PRIMARY EXAMINER